

## WEST Search History

DATE: Tuesday, September 23, 2003

<u>Set Name</u>	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u>
side by side			result set
	<i>DB=USPT,PGPB; PLUR=YES; OP=ADJ</i>		
L21	118 not polyurethane not polyisocyanate not polyester	31	L21
	<i>DB=JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=ADJ</i>		
L20	118 not polyurethane not polyisocyanate not polyester	0	L20
	(((trimethylolpropane or (trimethylol adj propane) )or (((tri\$1 or tetrakis) adj2 hydroxymethyl adj propane) or (bis adj2 hydroxymethyl adj2 butanol) or (ethyl adj2 hydroxymethyl adj4 (propanediol or propane adj diol)) or ethriol or ettriol )or (ethyltrimethylolmethane or (ethyltrimethylol adj methane) or (ethyl adj trimethylol adj methane) or (ethyl adj trimethylolmethane) ))near5 (((curing or hardening or crosslinking or (cross adj linking)) adj agent) or hardener or crosslinker or (cross adj linker) or curative) ) and ((epox?\$3 adj resin) or diepox?\$3 or polyepox?\$3 or diglycidyl\$ or polyglycidyl\$ ))	17	L19
	<i>DB=USPT,PGPB; PLUR=YES; OP=ADJ</i>		
L18	116 and 117	396	L18
L17	(epox?\$3 adj resin) or diepox?\$3 or polyepox?\$3 or diglycidyl\$ or polyglycidyl\$	95366	L17
L16	15 near5 (((curing or hardening or crosslinking or (cross adj linking)) adj agent) or hardener or crosslinker or (cross adj linker) or curative)	1087	L16
L15	113 not polyester not polyurethane	59	L15
	<i>DB=JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=ADJ</i>		
L14	(((trimethylolpropane or (trimethylol adj propane) )or (((tri\$1 or tetrakis) adj2 hydroxymethyl adj propane) or (bis adj2 hydroxymethyl adj2 butanol) or (ethyl adj2 hydroxymethyl adj4 (propanediol or propane adj diol)) or ethriol or ettriol )or (ethyltrimethylolmethane or (ethyltrimethylol adj methane) or (ethyl adj trimethylol adj methane) or (ethyl adj trimethylolmethane) ))and (tetramethylguanidine or (tetramethyl adj guanidine) ))	1	L14

and imidazole)

*DB=USPT,PGPB; PLUR=YES; OP=ADJ*

L13	17 and imidazole	174	L13
-----	------------------	-----	-----

*DB=JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=ADJ*

L12	(((trimethylolpropane or (trimethylol adj propane) )or (((tri\$1 or tetrakis) adj2 hydroxymethyl adj propane) or (bis adj2 hydroxymethyl adj2 butanol) or (ethyl adj2 hydroxymethyl adj4 (propanediol or propane adj diol)) or ethriol or ettriol )or (ethyltrimethylolmethane or (ethyltrimethylol adj methane) or (ethyl adj trimethylol adj methane) or (ethyl adj trimethylolmethane) ))and (tetramethylguanidine or (tetramethyl adj guanidine) )) and (((bis or di) adj2 hydroxymethyl adj3 (cresol or methylphenol)) or (dimethylol adj3 (methylphenol or cresol)) or dimethylolcresol or dimethylolmethylphenol )or ((hydroxy adj2 methyl adj4 benzenedimethanol) )))	0	L12
-----	--	---	-----

*DB=USPT,PGPB; PLUR=YES; OP=ADJ*

L11	17 and 110	2	L11
L10	18 or 19	247	L10
L9	(hydroxy adj2 methyl adj4 benzenedimethanol) ((bis or di) adj2 hydroxymethyl adj3 (cresol or methylphenol)) or (dimethylol adj3 (methylphenol or cresol)) or dimethylolcresol or dimethylolmethylphenol	2	L9
L8	15 and 16	245	L8
L7	tetramethylguanidine or (tetramethyl adj guanidine)	523	L7
L6	12 or 13 or 14	2109	L6
L5	ethyltrimethylolmethane or (ethyltrimethylol adj methane) or (ethyl adj trimethylol adj methane) or (ethyl adj trimethylolmethane)	39316	L5
L4	((tri\$1 or tetrakis) adj2 hydroxymethyl adj propane) or (bis adj2 hydroxymethyl adj2 butanol) or (ethyl adj2 hydroxymethyl adj4 (propanediol or propane adj diol)) or ethriol or ettriol	1	L4
L3	trimethylolpropane or (trimethylol adj propane)	802	L3
L2	trimethylolpropane or (trimethylol adj propane)	38953	L2
L1	trimethylolpropane or (trimethylol adj propane)]	30189	L1

END OF SEARCH HISTORY

683,984

# WEST Search History

DATE: Tuesday, September 23, 2003

## Set Name Query

side by side

## Hit Count Set Name

result set

*DB=JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=ADJ*

L7 ((epox?\$3 adj resin) or diepox?\$3 or polyepox?\$3 or diglycidyl\$ or polyglycidyl\$) and ( (((bis or di) adj2 hydroxymethyl adj3 (cresol or methylphenol)) or (dimethylol adj3 (methylphenol or cresol)) or dimethylolcresol or dimethylolmethylphenol ) or ((hydroxy adj2 methyl adj4 benzenedimethanol) )) or imidazole or imadazole) and (tetramethylguanidine or (tetramethyl adj guanidine))

6 L7

*DB=USPT,PGPB; PLUR=YES; OP=ADJ*

L6 12 and 14 and 15

26 L6

L5 (tetramethylguanidine or (tetramethyl adj guanidine)) near7 13

233 L5

L4 ( (((bis or di) adj2 hydroxymethyl adj3 (cresol or methylphenol)) or (dimethylol adj3 (methylphenol or cresol)) or dimethylolcresol or dimethylolmethylphenol ) or ((hydroxy adj2 methyl adj4 benzenedimethanol) )) or imidazole or imadazole) near7 13

3320 L4

L3 ((crosslinking or (cross adj linking) or curing or hardening) adj agent) or hardener or curative or crosslinker or (cross adj linker) or accelerator or catalyst

383242 L3

L2 (epox?\$3 adj resin) or diepox?\$3 or polyepox?\$3 or diglycidyl\$ or polyglycidyl\$

95366 L2

L1 (epox?\$3 adj resin) or diepox?\$3 or polyepox?\$3 or diglycidyl? or polyglycidyl?

91275 L1

END OF SEARCH HISTORY

## WEST Search History

DATE: Tuesday, September 23, 2003

### Set Name Query

side by side

### Hit Count Set Name

result set

*DB=JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=ADJ*

L3 (diethanolamine or (diethanol adj amine) or  
diethylaminopropylamine or (diethyl adj  
aminopropylamine) or (diethylaminopropyl adj amine)  
or (diethyl adj aminopropyl adj amine)) and (cresol or  
methylphenol) and (formaldehyde or formalin\$2)

8 L3

*DB=USPT,PGPB; PLUR=YES; OP=ADJ*

L2 (cresol or methylphenol) near7 (formaldehyde or  
formalin\$2) near7 11

4 L2

L1 diethanolamine or (diethanol adj amine) or  
diethylaminopropylamine or (diethyl adj  
aminopropylamine) or (diethylaminopropyl adj amine)  
or (diethyl adj aminopropyl adj amine)

30953 L1

END OF SEARCH HISTORY

683,984

(FILE 'HOME' ENTERED AT 12:58:37 ON 23 SEP 2003)

FILE 'CAPLUS' ENTERED AT 12:58:57 ON 23 SEP 2003

L1 163627 S (25085-99-8# OR 25068-38-6#)/RN OR (EPOX!###(3A)RESIN###)

OR

L2 163936 S L1 OR 1675-54-3#/RN

L3 13130 S (288-32-4# OR 91-04-3#)/RN

S 80-70-6#/RN OR 80-70-6/CRN

FILE 'REGISTRY' ENTERED AT 13:01:50 ON 23 SEP 2003

L4 237 S 80-70-6/CRN

FILE 'CAPLUS' ENTERED AT 13:01:51 ON 23 SEP 2003

L5 263 S L4

L6 885 S 80-70-6#/RN OR L5

L7 7 S L2 AND L3 AND L6

683,984

(FILE 'HOME' ENTERED AT 11:43:12 ON 23 SEP 2003)

FILE 'REGISTRY' ENTERED AT 11:43:43 ON 23 SEP 2003

L1 243400 S IMIDAZOLE  
L2 1 S 288-32-4/RN  
L3 1 S 77-99-6/RN  
L4 421 S TETRAMETHYLGUANIDINE  
L5 25 S BIS(3W)HYDROXYMETHYL(3W)CRESOL

FILE 'CAPLUS' ENTERED AT 11:49:44 ON 23 SEP 2003

L6 331 S 91-04-3#/RN  
L7 12801 S 288-32-4#/RN  
L8 5522 S 77-99-6#/RN  
L9 673 S 80-70-6#/RN  
L10 2 S (L6 OR L7) AND L8 AND L9

(FILE 'HOME' ENTERED AT 14:11:49 ON 23 SEP 2003)

FILE 'REGISTRY' ENTERED AT 14:12:53 ON 23 SEP 2003

L1 1 S 95-48-7/RN  
L2 1 S 108-39-4/RN  
L3 1 S 106-44-5

FILE 'REGISTRY' ENTERED AT 14:14:12 ON 23 SEP 2003

SET TERMSET E#  
DEL SEL Y  
SEL L2 1 RN

L4 1 S 50-00-0/RN  
L5 6 S DIETHYLAMINOPROPYLAMINE  
L6 1 S 104-78-9/RN  
L7 1 S 111-42-2#/RN

FILE 'CAPLUS' ENTERED AT 14:18:50 ON 23 SEP 2003

S 106-44-5#/RN OR 106-44-5#/CRN

FILE 'REGISTRY' ENTERED AT 14:19:21 ON 23 SEP 2003

L8 1291 S 106-44-5#/CRN

FILE 'CAPLUS' ENTERED AT 14:19:21 ON 23 SEP 2003

L9 3350 S L8  
L10 16712 S 106-44-5#/RN OR L9  
S 50-00-0#/RN OR 50-00-0#/CRN

FILE 'REGISTRY' ENTERED AT 14:19:39 ON 23 SEP 2003

L11 24620 S 50-00-0#/CRN

FILE 'CAPLUS' ENTERED AT 14:19:40 ON 23 SEP 2003

L12 73721 S L11  
L13 132403 S 50-00-0#/RN OR L12  
S 104-78-9#/RN OR 104-78-9#/CRN

FILE 'REGISTRY' ENTERED AT 14:20:11 ON 23 SEP 2003

L14 82 S 104-78-9#/CRN

FILE 'CAPLUS' ENTERED AT 14:20:11 ON 23 SEP 2003

L15 70 S L14  
L16 1108 S 104-78-9#/RN OR L15  
S 111-42-2#/RN OR 111-42-2#/CRN

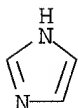
FILE 'REGISTRY' ENTERED AT 14:20:29 ON 23 SEP 2003

L17 4270 S 111-42-2#/CRN

FILE 'CAPLUS' ENTERED AT 14:20:29 ON 23 SEP 2003

L18 3292 S L17  
L19 14659 S 111-42-2#/RN OR L18  
L20 29 S L10 AND L13 AND (L16 OR L19)

RN 288-32-4 REGISTRY  
 CN 1H-Imidazole (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN Imidazole (8CI)  
 OTHER NAMES:  
 CN 1,3-Diaza-2,4-cyclopentadiene  
 CN 1,3-Diazole  
 CN Glyoxalin  
 CN Glyoxaline  
 CN Imidazol  
 CN Imutex  
 CN Methanimidamide, N,N'-1,2-ethenediyl-  
 CN Miazole  
 CN NSC 60522  
 FS 3D CONCORD  
 DR 146117-15-9, 116421-26-2  
 MF C3 H4 N2  
 CI COM, RPS  
 LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN\*,  
 BIOBUSINESS,  
 BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN,  
 CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSChem, CSNB, DDFU, DETHERM\*,  
 DRUGU, EMBASE, GMELIN\*, HODOC\*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE,  
 MRCK\*, MSDS-OHS, NAPRALERT, NIOSHTIC, PIRA, PROMT, RTECS\*, SPECINFO,  
 SYNTHLINE, TOXCENTER, TULSA, ULIDAT, USPAT2, USPATFULL, VETU  
 (\*File contains numerically searchable property data)  
 Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)

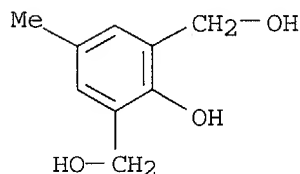


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

12769 REFERENCES IN FILE CA (1907 TO DATE)  
 2006 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 12787 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 101 REFERENCES IN FILE CAOLD (PRIOR TO 1967)



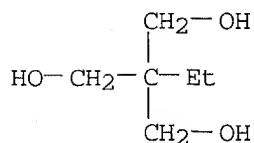
RN 91-04-3 REGISTRY  
 CN 1,3-Benzenedimethanol, 2-hydroxy-5-methyl- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN .alpha.1,.alpha.3-Mesitylenediol, 2-hydroxy- (6CI, 7CI, 8CI)  
 OTHER NAMES:  
 CN .alpha.1,.alpha.3,2-Trihydroxymesitylene  
 CN 2,6-Bis(hydroxymethyl)-4-methylphenol  
 CN **2,6-Bis(hydroxymethyl)-p-cresol**  
 CN 2,6-Di(hydroxymethyl)-p-cresol  
 CN 2,6-Dimethylol-4-methylphenol  
 CN 2,6-Dimethylol-p-cresol  
 CN 2-Hydroxy-5-methyl-1,3-benzenedimethanol  
 CN NSC 15838  
 FS 3D CONCORD  
 DR 312714-78-6  
 MF C9 H12 O3  
 CI COM  
 LC STN Files: BEILSTEIN\*, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS,  
 CHEMINFORMRX, CHEMLIST, CSChem, HODOC\*, IFICDB, IFIPAT, IFIUDB,  
 MSDS-OHS, PIRA, RTECS\*, SPECINFO, TOXCENTER, USPAT2, USPATFULL  
 (\*File contains numerically searchable property data)  
 Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

329 REFERENCES IN FILE CA (1907 TO DATE)  
 12 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 329 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 20 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

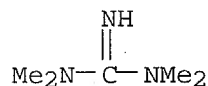
RN 77-99-6 REGISTRY  
 CN 1,3-Propanediol, 2-ethyl-2-(hydroxymethyl)- (8CI, 9CI) (CA INDEX NAME)  
 OTHER NAMES:  
 CN 1,1,1-Tetrakis(hydroxymethyl)propane  
 CN 1,1,1-Tri(hydroxymethyl)propane  
 CN 1,1,1-Trimethylolpropane  
 CN 1,1,1-Tris(hydroxymethyl)propane  
 CN 2,2-Bis(hydroxymethyl)-1-butanol  
 CN 2-Ethyl-2-(hydroxymethyl)-1,3-propanediol  
 CN 2-Ethyl-2-(hydroxymethyl)propanediol  
 CN Ethriol  
 CN Ethyltrimethylolmethane  
 CN Ettriol  
 CN NSC 3576  
 CN Propane, 1,1,1-tris(hydroxymethyl)-  
 CN RC Crosslinker TR  
 CN TMP  
 CN TMP (alcohol)  
 CN Trimethylolpropane  
 CN Tris(hydroxymethyl)propane  
 FS 3D CONCORD  
 DR 53632-31-8, 59218-55-2, 97649-49-5, 101164-61-8, 102984-18-9, 51811-73-5,  
 65581-89-7, 69896-09-9, 77974-02-8, 30774-18-6, 110368-52-0  
 MF C6 H14 O3  
 CI COM  
 LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN\*, BIOBUSINESS, BIOSIS,  
 CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS,  
 CHEMINFORMRX, CHEMLIST, CIN, CSCHM, CSNB, DETHERM\*, DIOGENES, DIPPR\*,  
 ENCOMPLIT, ENCOMPLIT2, ENCOMPAT, ENCOMPAT2, HODOC\*, HSDB\*, IFICDB,  
 IFIPAT, IFIUDB, MEDLINE, MSDS-OHS, NIOSHTIC, PDLCOM\*, PIRA, PROMT,  
 RTECS\*, SPECINFO, TOXCENTER, TULSA, ULIDAT, USPAT2, USPATFULL, VTB  
 (\*File contains numerically searchable property data)  
 Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

5509 REFERENCES IN FILE CA (1907 TO DATE)  
 2778 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 5520 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 143 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

RN 80-70-6 REGISTRY  
 CN Guanidine, N,N,N',N'-tetramethyl- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN Guanidine, 1,1,3,3-tetramethyl- (6CI, 8CI)  
 OTHER NAMES:  
 CN **1,1,3,3-Tetramethylguanidine**  
 CN **N,N,N',N'-Tetramethylguanidine**  
 CN **N1,N1,N3,N3-Tetramethylguanidine**  
 CN NSC 148309  
 FS 3D CONCORD  
 DR 142118-43-2, 197451-33-5  
 MF C5 H13 N3  
 CI COM  
 LC STN Files: BEILSTEIN\*, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS,  
 CHEMINFORMRX, CHEMLIST, CSCHEM, DETHERM\*, GMELIN\*, HODOC\*, IFICDB,  
 IFIPAT, IFIUDB, MSDS-OHS, SPECINFO, SYNTHLINE, TOXCENTER, USPAT2,  
 USPATFULL  
 (\*File contains numerically searchable property data)  
 Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

670 REFERENCES IN FILE CA (1907 TO DATE)  
 34 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 673 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 15 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

AN 2002:488263 CAPLUS  
 DN 137:48015  
 TI Epoxy hardeners for improved properties, processing and handling  
 IN Schile, Richard D.  
 PA USA  
 SO U.S. Pat. Appl. Publ., 13 pp., Cont.-in-part of U.S. Ser. No. 714,043.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 IC ICM C08G059-68  
 NCL 528094000  
 CC 37-6 (Plastics Manufacture and Processing)  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002082379	A1	20020627	US 2002-683984	20020308
	US 6491845	B1	20021210	US 2000-714043	20001116
PRAI	US 2000-714043	A2	20001116		

AB An epoxy hardener compn. having a cure temp. of 60-100.degree. comprises  
 a

mixt. of: (a) one of imidazole and a trihydric compd. having methylol  
 groups at the 2- and 6- positions formed by reacting a 4-alkyl phenol  
 with  
 2 mol of formaldehyde; (b) trimethylolpropane; and (c) one of  
 tetramethylguanadine and tetramethylguanadine adduct. The hardeners have  
 the capability of curing at lower temps. than currently available  
 hardeners while retaining superior mech. and thermal properties.  
 Accelerators and other materials are added as needed to modify the cure  
 time and temp. to suit particular applications. A method for making the  
 hardener is also disclosed.

ST hardener imidazole trimethylolpropane tetramethylguanadine epoxy resin  
 IT Adhesives

Crosslinking agents  
 (epoxy hardeners for improved properties, processing and handling)

IT Epoxy resins, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (epoxy hardeners for improved properties, processing and handling)

IT Amines, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (tertiary, hardener mixt.; epoxy hardeners for improved properties,  
 processing and handling)

IT 80-70-6DP, reaction products with epoxy resins 111-40-0DP,  
 Diethylenetriamine, reaction products with trimethylolpropane-bisphenol A  
 reaction products 96141-20-7DP, EPON862, reaction products with  
 tetramethylguanidine

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation);  
 RACT

(Reactant or reagent)  
 (epoxy hardeners for improved properties, processing and handling)

IT 25068-38-6, EPON828  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (epoxy hardeners for improved properties, processing and handling)

IT 77-99-6DP, Trimethylolpropane, reaction products with  
 butylglycidyl ether 80-05-7DP, Bisphenol A, reaction products with  
 trimethylolpropane 108-46-3DP, Resorcinol, reaction products with  
 trimethylolpropane 120-80-9DP, Catechol, reaction products with  
 bisphenol A epoxy resin 2210-79-9DP, o-Cresyl glycidylether, reaction  
 products with trimethylolpropane 2426-08-6DP, Butylglycidyl ether,  
 reaction products with trimethylolpropane 25068-38-6DP, EPON828,

reaction products with catechol

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation);

RACT

(Reactant or reagent)

(hardener mixt.; epoxy hardeners for improved properties, processing and handling)

IT

**77-99-6**, Trimethylolpropane **80-70-6** **91-04-3**,

2, 6-Bis(hydroxymethyl)-p-cresol **288-32-4**, Imidazole, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(hardener mixt.; epoxy hardeners for improved properties, processing and handling)

AN 2002:408713 CAPLUS  
 DN 136:402611  
 TI Novel epoxy hardeners for improved properties, processing, and handling  
 IN Schile, Richard D.  
 PA USA  
 SO PCT Int. Appl., 41 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 IC ICM C08G  
 CC 37-6 (Plastics Manufacture and Processing)  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002042349	A2	20020530	WO 2001-US50715	20011107
	WO 2002042349	A3	20020906		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	US 6491845	B1	20021210	US 2000-714043	20001116
	AU 2002039716	A5	20020603	AU 2002-39716	20011107
PRAI	US 2000-714043	A	20001116		
	WO 2001-US50715	W	20011107		
AB	Novel hardeners for epoxy resins are disclosed which have the capability of curing at lower temps. than currently available hardeners while retaining superior mech. and thermal properties. These novel hardeners include a range of reactivity which results in a range of pot lives from minutes to months. These materials co-cure readily with polyamines and have little or no amine odor. Mixt. viscosity can be controlled over a wide range independent of filler concn. which allows a broad range of applications from coating and casting to adhesives. Class I hardeners contain a mixt. of polyols, polyamines and tertiary amines and cure at temps. between 20-50.degree., while class II hardeners have the same polyols mixed with one or more tertiary amines and cure between 65-100.degree.. Class III hardeners contain the same polyols combined with either imadazole or dicyandiamide, optionally, a tertiary amine and cure at 120.degree..				
ST	epoxy curing agent polyol polyamine tertiary amine combination				
IT	Crosslinking agents (epoxy hardener based on polyol-polyamine-tertiary amine combination)				
IT	Epoxy resins, uses RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses) (epoxy hardener based on polyol-polyamine-tertiary amine combination)				
IT	Amines, uses RL: MOA (Modifier or additive use); USES (Uses) (polyamines, nonpolymeric; epoxy hardener based on polyol-polyamine-tertiary amine combination)				
IT	Alcohols, uses RL: MOA (Modifier or additive use); USES (Uses) (polyhydric; epoxy hardener based on polyol-polyamine-tertiary amine combination)				
IT	Amines, uses				

RL: MOA (Modifier or additive use); USES (Uses)  
 (tertiary; epoxy hardener based on polyol-polyamine-tertiary amine combination)

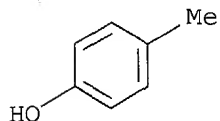
IT 77-99-6DP, Trimethylolpropane, reaction products 80-05-7DP, Bisphenol A, ring-substitution reaction products with trimethylolpropane 108-46-3DP, Resorcinol, ring-substitution reaction products with trimethylolpropane 120-80-9DP, Catechol, adducts with glycidyl compds. 2426-08-6DP, Butyl glycidyl ether, reaction products with polyols 25068-38-6DP, Epon 828, adducts with catechol  
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)  
 (epoxy hardener based on polyol-polyamine-tertiary amine combination)

IT 77-99-6, Trimethylolpropane 80-70-6 91-04-3, 2,6-Bis(hydroxymethyl)-p-cresol 103-83-3, Dimethylbenzylamine 104-78-9, 3-(N,N-Diethylamino)propylamine 106-44-5, p-Cresol, uses 107-15-3, Ethylenediamine, uses 109-01-3, 1-Methylpiperazine 111-40-0, Diethylenetriamine 111-42-2, Diethanolamine, uses 112-24-3, Triethylenetetramine 112-57-2, Tetraethylenepentamine 288-32-4, Imidazole, uses 461-58-5, Dicyandiamide 2664-63-3, 4,4'-Thiodiphenol  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (epoxy hardener based on polyol-polyamine-tertiary amine combination)

IT 25068-38-6, Epon 828  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (epoxy hardener based on polyol-polyamine-tertiary amine combination)

IT 2210-79-9DP, o-Cresyl glycidyl ether, reaction products with trimethylolpropane  
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)  
 (reaction involves both epoxy group and arom. ring; epoxy hardener based on polyol-polyamine-tertiary amine combination)

RN 106-44-5 REGISTRY  
 CN Phenol, 4-methyl- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN p-Cresol (8CI)  
 OTHER NAMES:  
 CN 1-Hydroxy-4-methylbenzene  
 CN 4-Cresol  
 CN 4-Hydroxytoluene  
 CN 4-Methylphenol  
 CN NSC 3696  
 CN p-Cresylic acid  
 CN p-Hydroxytoluene  
 CN p-Methylhydroxybenzene  
 CN p-Methylphenol  
 CN p-Oxytoluene  
 CN p-Toluol  
 CN p-Tolyl alcohol  
 FS 3D CONCORD  
 MF C7 H8 O  
 CI COM  
 LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN\*, BIOBUSINESS, BIOSIS,  
 BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN,  
 CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB, DDFU,  
 DETHERM\*, DIPPR\*, DRUGU, EMBASE, GMELIN\*, HODOC\*, HSDB\*, IFICDB,  
 IFIPAT,  
 IFIUDB, IPA, MEDLINE, MRCK\*, MSDS-OHS, NIOSHTIC, PDLCOM\*, PIRA, PROMT,  
 RTECS\*, SPECINFO, SYNTHLINE, TOXCENTER, ULIDAT, USPAT2, USPATFULL, VTB  
 (\*File contains numerically searchable property data)  
 Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

13516 REFERENCES IN FILE CA (1907 TO DATE)  
 343 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 13544 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 13 REFERENCES IN FILE CAOLD (PRIOR TO 1967)



RN 111-42-2 REGISTRY  
 CN Ethanol, 2,2'-iminobis- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN Ethanol, 2,2'-iminodi- (8CI)  
 OTHER NAMES:  
 CN 2,2'-Dihydroxydiethylamine  
 CN 2,2'-Iminobis[ethanol]  
 CN 2,2'-Iminodi-1-ethanol  
 CN 2,2'-Iminodiethanol  
 CN 2-[(2-Hydroxyethyl)amino]ethanol  
 CN Bis(2-hydroxyethyl)amine  
 CN Bis(hydroxyethyl)amine  
 CN Dabco DEOA-LF  
 CN DEA  
 CN Di(.beta.-hydroxyethyl)amine  
 CN Di(2-hydroxyethyl)amine  
 CN Diethanolamine  
 CN Diolamine  
 CN Iminodiethanol  
 CN N,N'-Iminodiethanol  
 CN N,N-Bis(2-hydroxyethyl)amine  
 CN N,N-Diethanolamine  
 CN Niox DEOA-LF  
 CN NSC 4959  
 FS 3D CONCORD  
 DR 8033-73-6  
 MF C4 H11 N O2  
 CI COM  
 LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN\*, BIOBUSINESS, BIOSIS,  
 BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS,  
 CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB, DDFU, DETHERM\*,  
 DIOGENES, DIPPR\*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT,  
 ENCOMPPAT2, GMELIN\*, HODOC\*, HSDB\*, IFICDB, IFIPAT, IFIUDB, IPA,  
 MEDLINE, MRCK\*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM\*, PIRA, PROMT,  
 RTECS\*, SPECINFO, SYNTHLINE, TOXCENTER, TULSA, ULIDAT, USAN, USPAT2,  
 USPATFULL, VTB  
 (\*File contains numerically searchable property data)  
 Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

11704 REFERENCES IN FILE CA (1907 TO DATE)  
 2832 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 11717 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 21 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

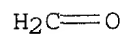
RN 104-78-9 REGISTRY  
 CN 1,3-Propanediamine, N,N-diethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)  
 OTHER NAMES:  
 CN .gamma.-(Diethylamino)propylamine  
 CN 1-Amino-3-(diethylamino)propane  
 CN 3-(Diethylamino)-n-propylamine  
 CN 3-(Diethylamino)propanamine  
 CN 3-(Diethylamino)propylamine  
 CN 3-(N,N-Diethylamino)-1-propylamine  
 CN 3-(N,N-Diethylamino)propylamine  
 CN 3-Diethylamino-1-propylamine  
 CN Diethylaminotrimethylenamine  
 CN N,N-Diethyl-1,3-diaminopropane  
 CN N,N-Diethyl-1,3-propanediamine  
 CN N,N-Diethyl-1,3-propylenediamine  
 CN N,N-Diethyltrimethylenediamine  
 CN N-(3-Diethylaminopropyl)amine  
 CN N-(Diethylaminopropyl)amine  
 CN NSC 7776  
 FS 3D CONCORD  
 MF C7 H18 N2  
 CI COM  
 LC STN Files: BEILSTEIN\*, CA, CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS,  
 CHEMINFORMRX, CHEMLIST, CHEMSAFE, CSCHEM, DETHERM\*, GMELIN\*, HODOC\*,  
 IFICDB, IFIPAT, IFIUDB, MSDS-OHS, RTECS\*, SPECINFO, SYNTHLINE,  
 TOXCENTER, USPAT2, USPATFULL  
 (\*File contains numerically searchable property data)  
 Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)

H<sub>2</sub>N-(CH<sub>2</sub>)<sub>3</sub>-NEt<sub>2</sub>

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1053 REFERENCES IN FILE CA (1907 TO DATE)  
 240 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 1054 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 35 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

RN 50-00-0 REGISTRY  
 CN Formaldehyde (8CI, 9CI) (CA INDEX NAME)  
 OTHER NAMES:  
 CN BFV  
 CN F-gen  
 CN Fannoform  
 CN Floguard 1015  
 CN FM 282  
 CN Fordor  
 CN Formalin  
 CN Formalith  
 CN Formic aldehyde  
 CN Formol  
 CN Fyde  
 CN Lysoform  
 CN Methaldehyde  
 CN Methanal  
 CN Methyl aldehyde  
 CN Methylene oxide  
 CN Morbucid  
 CN NSC 298885  
 CN Oxomethane  
 CN Oxymethylene  
 CN Paraform  
 CN Superlysoform  
 FS 3D CONCORD  
 DR 8005-38-7, 8006-07-3, 8013-13-6, 112068-71-0  
 MF C H2 O  
 CI COM  
 LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN\*,  
 BIOBUSINESS,  
 BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB,  
 CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB,  
 DDFU, DETHERM\*, DIOGENES, DIPPR\*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2,  
 ENCOMPPAT, ENCOMPPAT2, GMELIN\*, HODOC\*, HSDB\*, IFICDB, IFIPAT, IFIUDB,  
 IPA, MEDLINE, MRCK\*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM\*, PIRA,  
 PROMT, RTECS\*, SPECINFO, TOXCENTER, TULSA, ULIDAT, USAN, USPAT2,  
 USPATFULL, VETU, VTB  
 (\*File contains numerically searchable property data)  
 Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

62295 REFERENCES IN FILE CA (1907 TO DATE)  
 5458 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 62349 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 19 REFERENCES IN FILE CAOLD (PRIOR TO 1967)